ETH zürich

D MAVT

Professor Andreas Güntner

«The process of knowledge creation provides the best opportunities for personalized teaching. I teach my students to seek for the simplest solution first when solving real-world problems.»

Human-centered Sensing Lab

Institute of Energy and Process Engineering

Our lab works at the intersection between chemistry, physics, and engineering to equip next-generation electronics with the sense of smell. We investigate new concepts in chemical sensing by leveraging nanotechnology and foster their integration into wearable or handheld devices for health, food and environmental monitoring to improve human well-being. We offer a unique bouquet of fundamental and applied research on sensor technologies to respond to society's needs. We thereby uphold and enforce the interdisciplinary education of students in chemical, mechanical, and biomedical engineering.

Research focus

- Micro- and nanoscaled systems
- Surface phenomena and molecular transport
- Gas sensing and signal processing
- Volatolomics

Tools and methods

- Dry nanoparticle and porous film synthesis
- Material and surface characterization techniques
- Electronic/optical sensor signal processing
- Clinical evaluation

Further details online:
www.hsl.ethz.ch